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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,235	06/15/2001	Joerg Schwenk	2345/150	3132

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EXAMINER
DADA, BEEMNET W

ART UNIT	PAPER NUMBER
2135	

MAIL DATE	DELIVERY MODE
05/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/807,235	SCHWENK ET AL.
	Examiner	Art Unit	
	BEEMNET W. DADA	2135	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>31 March 2008</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>4 and 6-10</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>4 and 6-10</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in reply to an amendment filed on April 01, 2008. Claims 4 and 6-9

are pending.

Response to Arguments

Applicant's arguments filed on 04/01/2008 have been considered but are moot in view of

the new ground(s) of rejection. Examiner would point out that, after further consideration of the

art on record, the Freidrich patent discloses generating the watermark step including generating

the watermark as a function of the proof of identity identification (i.e., author's ID, author's

signature, column 6, lines 57-66) the first hash value of the document (i.e., hash of the

image/image digest, column 6, lines 57-column 7, line 2) and an authentic time stamp (i.e., date

and time of the origin of the image, column 6, line 57-column 7, line 11), as indicated in the

claim rejection below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fridrich (6,101,602) in view of Wong (6,504,941 B2).

In reference to claims 4 and 9, Fridrich discloses a method and system for authenticating using a watermark (abstract). The method comprises generating digital watermarks electronic documents, where the owner of a document hides a digital watermark as proof of identity in the document (Fig. 3), prior to being hidden, the watermark being not only provided with the proof of identity id, but also at least with the hash value h(m) of the document (column 5 lines 59-61). Fridrich verifies (authenticates) ownership of the document by comparing the hash value of the document (column 6 line 65 to column 7 line 5).

Fridrich further teaches generating the watermark step including generating the watermark as a function of the proof of identity identification (i.e., author's ID, author's signature, column 6, lines 57-66) the first hash value of the document (i.e., hash of the image/image digest, column 6, lines 57-column 7, line 2) and an authentic time stamp (i.e., date and time of the origin of the image, column 6, line 57-column 7, line 11).

Although Fridrich discloses the overlaid pattern depends on the key, Fridrich does not expressly disclose a secret key for making the watermark visible, characterized in that, to verify the true authorship, reversibly embedded watermarks are removed again with the assistance of the secret keys in order to restore the document to its original state, i.e., to check it on the basis of its hash values.

Wong discloses a method and system that provides an invisible watermark that may be used in public key or secret key watermark systems (abstract). The system of Wong disclose a secret key for making the watermark visible, characterized in that, to verify the true authorship, reversibly embedded watermarks are removed again with the assistance of the secret keys in order to restore the document to its original state, i.e., to check it on the basis of its hash values (Fig. 10 A in combination with column 2 line 59 to column 3 line 9).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to associate a user key with a watermark as in Wong in the system of Fridrich. One of ordinary skill in the art would have been motivated to do this because it may be used as a method of ownership verification so that the desired watermark can only be extracted from a watermarked image with the appropriate user key (Wong column 1 lines 50-64).

*In reference to claims 5,*characterized in that, prior being hidden, the digital watermark is not only provided with the proof of identity id, also with an authentic time stamp, which, besides the time value t, also contains at least the hash value of the document, and, in addition, defines the embedding sequence (column 6 line 65 to column 7 line 11).

In reference to claim 6, wherein the authentic time stamp defines an embedding sequence. Fridrich discloses the including the time stamp in the watermark (column 7 lines 1-5), therefore defining the embedding sequence because the time affects that watermark that is embedded.

Claims 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fridrich in view of Wong as applied to claims 4 and 9 above, and further in view of Rhoads et al (6,636,615 B1).

In reference to claim 7 Fridrich discloses using hash values to associate the digital watermark with a specific image and therefore use the hash value to determine the original owner (column 5 line 59 to column 6 line 3).

However neither Fridrich nor Wong disclose using multiple watermarks.

Rhoads discloses embedding several watermarks into the same image (Fig. 4 and column 5 lines 15-46). It follows that to restore the image to the original state all the different watermarks would have to be removed using the method disclosed by Wong.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to embed multiple watermarks as disclosed by Rhoads in the system of Fridrich. One of ordinary skill in the art would have been motivated to do this because multiple watermarks can be used to convey multiple sets of information.

In reference to claim 8, wherein the restoring step includes restoring the document to the original state by removing all of the different watermarks in accordance with an embedding sequence.

Although Rhoads discloses embedding multiple watermarks in the same image (Section 2 page 2068), Fridrich, Wong, and Rhoads do not expressly disclose restoring the document to the original state by removing all of the different watermarks.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to remove the multiple watermark to restore the document to the original form in the system of Fridrich. One of ordinary skill in the art would have been motivated to do this because the watermarks add noise to the image and therefore to restore the image to the original form the noise would need to be removed.

In reference to claim 10 Fridrich discloses using hash values to associate the digital watermark with a specific image and therefore use the hash value to determine the original owner (column 5 line 59 to column 6 line 3).

However neither Fridrich nor Wong disclose using multiple watermarks.

Rhoads discloses embedding several watermarks into the same image (Fig. 4 and column 5 lines 15-46). It follows that to restore the image to the original state all the different watermarks would have to be removed using the method disclosed by Wong.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to embed multiple watermarks as disclosed by Rhoads in the system of Fridrich. One of ordinary skill in the art would have been motivated to do this because multiple watermarks can be used to convey multiple sets of information.

Although Rhoads discloses embedding multiple watermarks in the same image (Section 2 page 2068), Fridrich, Wong, and Rhoads do not expressly disclose restoring the document to the original state by removing all of the different watermarks.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to remove the multiple watermark to restore the document to the original form in the system of Fridrich. One of ordinary skill in the art would have been motivated to do this because the watermarks add noise to the image and therefore to restore the image to the original form the noise would need to be removed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BEEMNET W. DADA whose telephone number is (571)272-3847. The examiner can normally be reached on Monday - Friday (9:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
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would like assistance from a USPTO Customer Service Representative or access to the
automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Beemnet W Dada/

May 22, 2008
/KIMYEN VU/
Supervisory Patent Examiner, Art Unit 2135